

Utah Influenza Report

This report contains data through the week ending 02/14/2015 (MMWR week 06).

Overview of Influenza Surveillance: Surveillance for the 2014-2015 influenza season officially began on September 28, 2014. The Utah Department of Health publishes a weekly report throughout the active influenza season that synthesizes data from a variety of sources to give the most complete and up-to-date picture of influenza activity in the state of Utah. Data in this report should be considered provisional, and may change as more complete reports are received.

Influenza-like Illness (ILI): The U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) is a national system that conducts surveillance for influenza-like illness (ILI) in outpatient healthcare facilities. ILINet providers report weekly the total number of patients seen for any reason and the number of patients seen with ILI (defined as a fever $\geq 100^{\circ}$ F and a cough or sore throat). These data are used to determine the amount of ILI circulating in the community, as well as provide insight into regional differences in ILI activity. More than 50 facilities within 10 health jurisdictions throughout Utah participate in ILINet.

Figure 1. Weekly Influenza-like Illness Activity

Influenza-like illness (ILI) activity as measured by the number of standard deviations from the epidemic threshold - Utah, 2014-2015

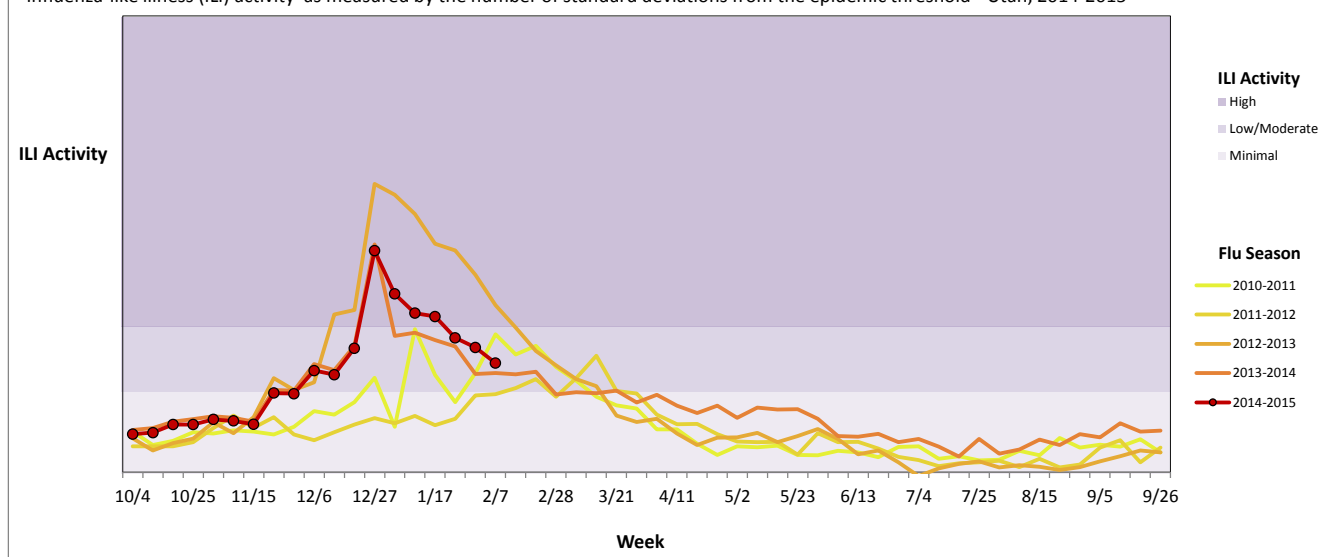


Table 1. Influenza-like Illness (ILI) Activity Levels by Health District - Utah, Current Week

Health District	ILI Activity
Bear River	Low/Moderate
Central Utah	Low/Moderate
Davis County	Low/Moderate
Salt Lake County	Low/Moderate
Southeast Utah	No Data *
Southwest Utah	Low/Moderate
Summit County	Minimal
Tooele County	Minimal
TriCounty	No Data *
Utah County	Low/Moderate
Wasatch County	Minimal
Weber-Morgan	Low/Moderate
State Average	Low/Moderate

*No participating sites in this jurisdiction

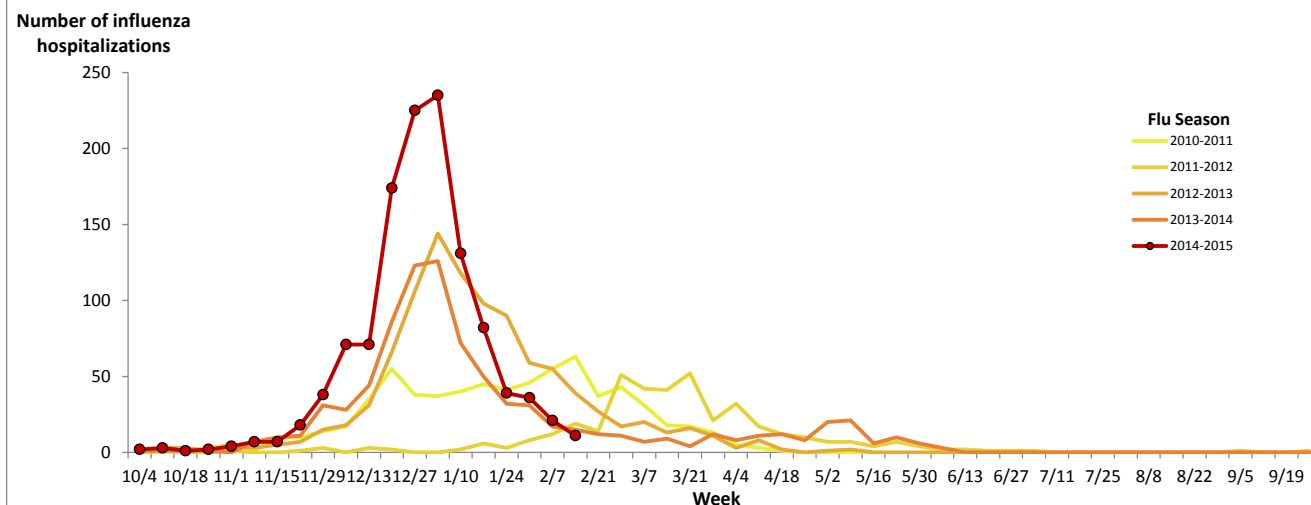
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Influenza Hospitalizations: Influenza hospitalizations are a reportable condition in Utah. A person meets the case definition for an influenza hospitalization if they are hospitalized for any length of time and have an influenza positive serology, DFA, PCR, culture or rapid influenza diagnostic test. Public health in Utah gathers a variety of data on influenza hospitalizations including clinical features, course of illness, risk and protective factors, and influenza type and subtype. Data from influenza hospitalizations allows public health in Utah to better understand subgroups of the Utah population that are most severely affected by influenza and help to guide prevention messages and interventions.

Figure 2. Influenza Hospitalizations

Number of influenza hospitalizations by event date* - Utah, 2014-2015



*Event date is calculated based on a hierarchy of dates: 1. onset date 2. specimen collection date 3. date reported to public health.

Table 2. Influenza Hospitalizations by Health District - Utah

Health District	Current Week	Season To Date
Bear River	1	47
Central Utah	1	20
Davis County	0	120
Salt Lake County	4	612
Southeast Utah	0	2
Southwest Utah	5	84
Summit County	0	17
Tooele County	0	7
TriCounty	0	19
Utah County	0	136
Wasatch County	0	8
Weber-Morgan	0	106
State Total	11	1178

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Table 3. Influenza Hospitalizations by Age Group - Utah, Season To Date

Age Group	Total Cases	% of Cases	Rate*
0-4	111	9.4	41.8
5-24	94	8.0	9.8
25-49	129	11.0	13.5
50-64	178	15.1	43.0
65+	666	56.5	253.6
Total	1178	100.0	41.3

*Rate is calculated as the number of cases per 100,000 population

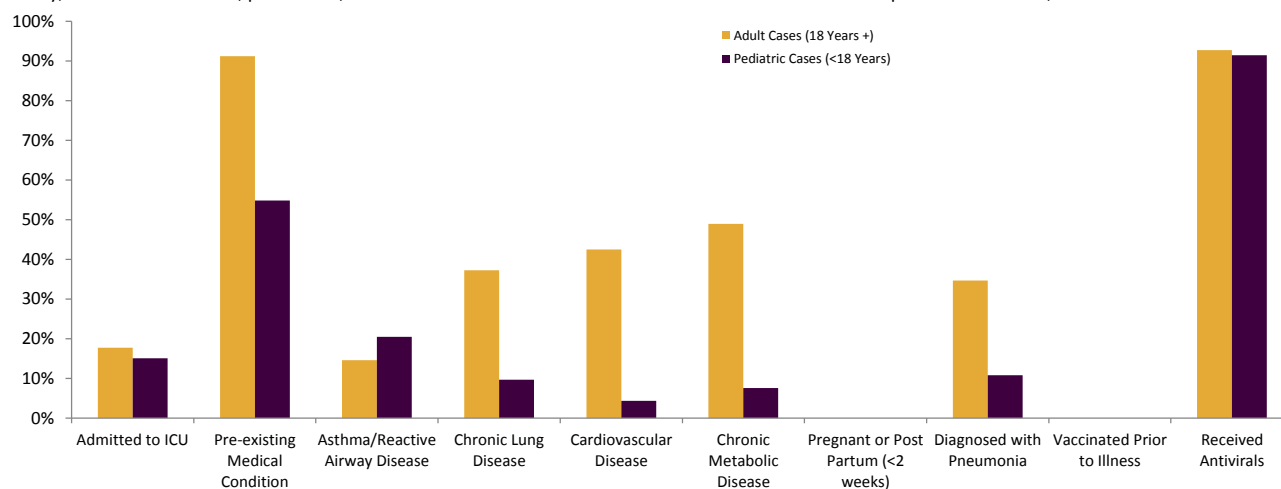
Table 4. Influenza Hospitalizations by Sex and Race - Utah, Season To Date

Variable	Num. of Cases	% of Cases	% in Utah Pop	p value*
Sex				
Male	567	48.1	50.2	0.1468
Female	606	51.4	49.8	0.2477
Unknown	5	0.4	NA	--
Race				
White, Not Hispanic	776	68.0	79.9	0.3050
Hispanic	96	8.4	11.9	<0.0001
Native Hawaiian/Pacific Islander	27	2.4	1.0	<0.0001
Black/African American	14	1.2	1.3	<0.0001
American Indian	9	0.8	1.5	0.0032
Asian	13	1.1	2.2	0.0003
Unknown	207	18.1	NA	--

*If a p value is ≤ 0.05 , there is a significant difference between the percentage seen in influenza hospitalizations and the general Utah population.

Figure 3. Summary Data for Influenza Hospitalizations

Severity, common risk factors, prevention, and treatment information collected on a subset of influenza hospitalizations - Utah, 2014-2015



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Student Absenteeism: School-age children are at high risk for respiratory virus infections, including influenza. Aggregate, all-cause absenteeism data is collected weekly from over 350 schools throughout Utah. These data are analyzed to identify elevated absenteeism rates that could indicate the circulation of influenza in school-age children.

Figure 4. Student Absenteeism by Week

Rates for absences due to all causes - Utah, 2014-2015 and previous 3 year average

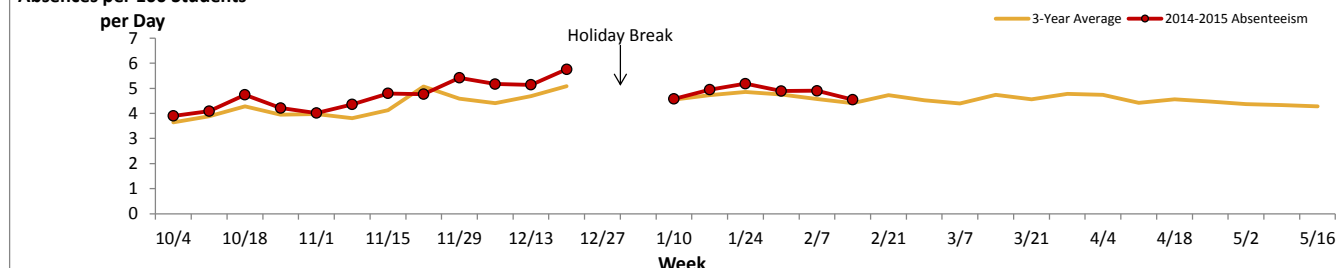


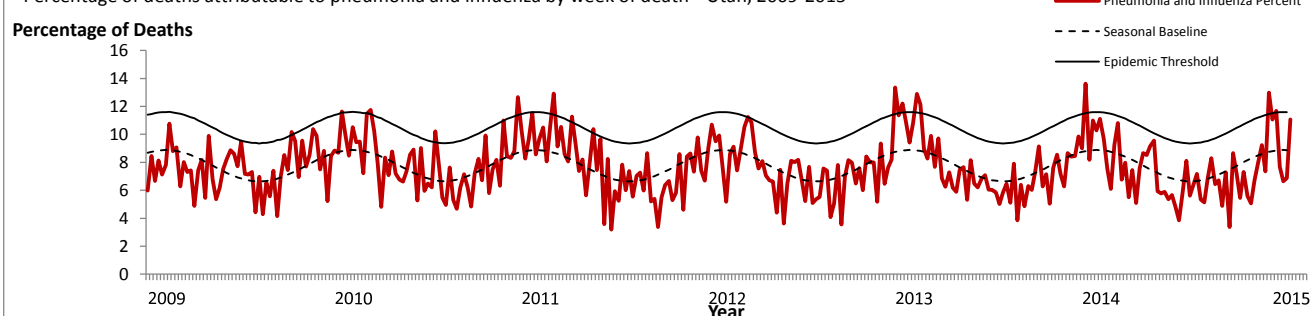
Table 6. Weekly Student Absenteeism - Utah, Current Week

Health District	Absences per 100 students/day
Bear River	3.5
Central Utah	4.3
Davis County	4.0
Salt Lake County	4.2
Southeast Utah	5.8
Southwest Utah	5.7
Summit County	5.9
Tooele County	5.6
TriCounty	6.6
Utah County	2.5
Wasatch County	4.3
Weber-Morgan	5.8
State Average	4.8

Pneumonia and Influenza Deaths: Each week the total number of death certificates received and the number of those for which pneumonia or influenza was listed as an underlying or contributing cause of death is collected. The percentage of deaths due to pneumonia and influenza are compared with a seasonal baseline and epidemic threshold value calculated for each week. These data are used to monitor the severity of influenza illness in the community.

Figure 5. Pneumonia and Influenza Deaths

Percentage of deaths attributable to pneumonia and influenza by week of death - Utah, 2009-2015



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Laboratory Surveillance: The Utah Public Health Laboratory receives specimens from all over the state for comprehensive influenza testing. All specimens are tested to determine influenza type and subtype. A portion of specimens are also sent to the Centers for Disease Control and Prevention for additional testing, including gene sequencing, antiviral resistance testing and antigenic characterization.

Figure 6. Influenza Positive Tests

Influenza positive specimens tested by the Utah Public Health Laboratory - Utah, 2014-2015

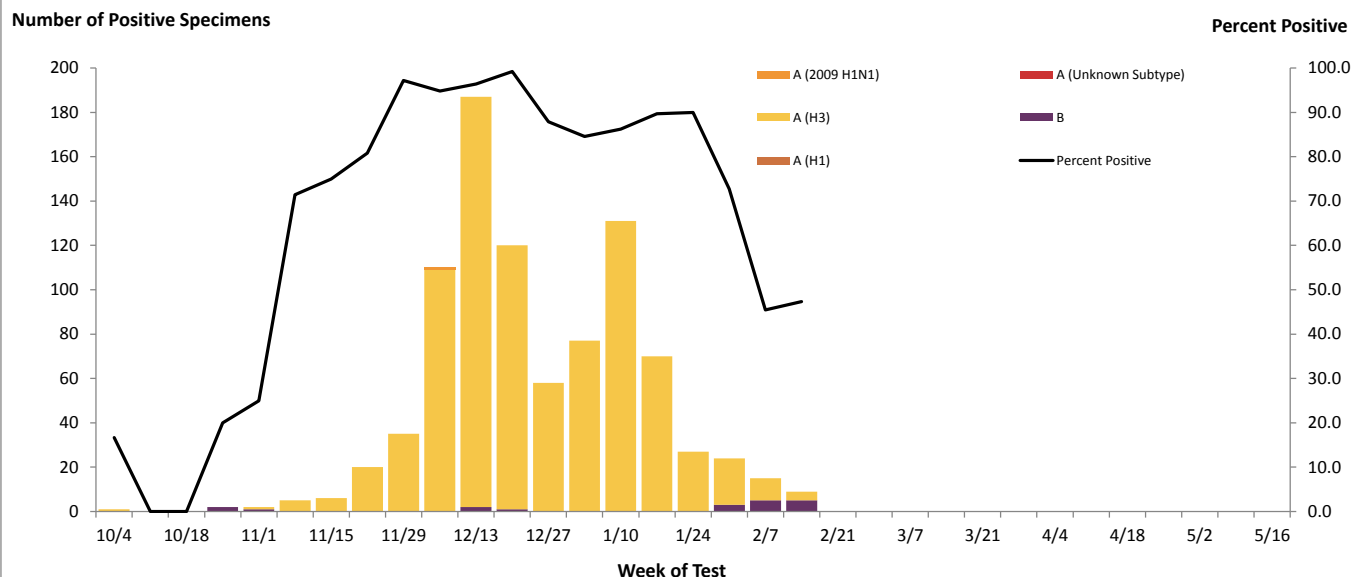


Table 8. Utah Public Health Laboratory Influenza Testing Data

	Current Week		Season To Date	
	Total	Percent	Total	Percent
Specimens tested	19	--	1,018	--
Positive specimens	9	47.4	899	88.3
Positive Specimens by Type/Subtype				
Influenza A	4	44.4	880	97.9
A (2009 H1N1)	0	0.0	1	0.1
A (H1)	0	0.0	0	0.0
A (H3)	4	100.0	879	99.9
A (unable to subtype)	0	0.0	0	0.0
Influenza B	5	55.6	19	2.1